

LISTING OF THE CLAIMS

1. (Original) An isolated anti-interferon alpha monoclonal antibody, or an antigen-binding portion thereof, wherein the antibody:
 - (a) inhibits biological activity of multiple interferon (IFN) alpha subtypes but does not substantially inhibit biological activity of IFN alpha 21; and
 - (b) does not substantially inhibit biological activity of IFN beta or IFN omega.
2. (Original) The antibody of claim 1, wherein the antibody inhibits IFN-induced surface expression of CD38 or MHC Class I on peripheral blood mononuclear cells.
3. (Original) The antibody of claim 1, wherein the antibody inhibits IFN-induced expression of IP-10 by peripheral blood mononuclear cells.
4. (Original) The antibody of claim 1, wherein the antibody inhibits dendritic cell development mediated by systemic lupus erythematosus (SLE) plasma.
5. (Original) The antibody of claim 1, which inhibits the biological activity of multiple human IFN alpha subtypes but does not substantially inhibit the biological activity of human IFN alpha 21.
6. (Original) The antibody of claim 1, wherein the antibody: (i) does not inhibit the binding of an IFN alpha to cells expressing interferon alpha receptor (IFNAR) and (ii) binds to cells expressing IFNAR in the presence of an IFN alpha.
7. (Original) The antibody of claim 1, which is a human antibody.
8. (Original) The antibody of claim 1, which is full-length antibody of an IgG1 or IgG4 isotype.
9. (Original) The antibody of claim 1, which is an antibody fragment or a single chain antibody.
10. (Original) An isolated anti-interferon alpha monoclonal antibody, or an antigen-binding portion thereof, wherein the antibody:
 - (a) comprises a heavy chain variable region of a human VH 1-18 or 4-61 gene;

- (b) comprises a light chain variable region of a human Vk A27 gene; and
- (c) inhibits biological activity of at least one interferon alpha subtype.

11. (Original) The antibody of claim 10, which comprises a heavy chain variable region of a human VH 1-18 gene.

12. (Original) The antibody of claim 10, which comprises a heavy chain variable region of a human VH 4-61 gene.

13. (Currently amended) ~~An~~ The isolated anti-interferon alpha monoclonal antibody, or antigen binding portion thereof, of claim 1 comprising a heavy chain variable region comprising CDR1, CDR2, and CDR3 sequences and a light chain variable region comprising CDR1, CDR2, and CDR3 sequences, wherein:

- (a) the heavy chain variable region CDR3 sequence comprises an amino acid sequence selected from the group consisting of amino acid sequences of SEQ ID NOs: 7, 8 and 9, and conservative modifications thereof; and
- (b) the light chain variable region CDR3 sequence comprises an amino acid sequence selected from the group consisting of amino acid sequence of SEQ ID NOs: 16, 17 and 18, and conservative modifications thereof;
- (c) ~~the antibody inhibits biological activity of multiple IFN alpha subtypes but does not substantially inhibit biological activity of IFN alpha 21; and~~
- (d) ~~the antibody does not substantially inhibit biological activity of IFN beta or IFN omega.~~

14. (Original) The antibody of claim 13, wherein the antibody inhibits IFN-induced surface expression of CD38 or MHC Class I on peripheral blood mononuclear cells.

15. (Original) The antibody of claim 13, wherein the antibody inhibits IFN-induced expression of IP-10 by peripheral blood mononuclear cells.

16. (Original) The antibody of claim 13, wherein the antibody inhibits dendritic cell development mediated by systemic lupus erythematosus (SLE) plasma.

17. (Original) The antibody of claim 13, wherein the heavy chain variable region CDR2 sequence comprises an amino acid sequence selected from the group consisting of amino acid sequences of SEQ ID NOs: 4, 5 and 6, and conservative modifications thereof; and the light chain variable region CDR2 sequence comprises an amino acid sequence selected from the group consisting of amino acid sequences of SEQ ID NOs: 13, 14 and 15, and conservative modifications thereof.

18. (Original) The antibody of claim 17, wherein the heavy chain variable region CDR1 sequence comprises an amino acid sequence selected from the group consisting of amino acid sequences of SEQ ID NOs: 1, 2 and 3, and conservative modifications thereof; and the light chain variable region CDR1 sequence comprises an amino acid sequence selected from the group consisting of amino acid sequences of SEQ ID NOs: 10, 11 and 12, and conservative modifications thereof.

19. (Original) The antibody of claim 13, which is a human antibody.

20. (Currently amended) The antibody of claim ~~13~~1, which is a humanized or chimeric antibody.

21. (Currently amended) ~~An~~ The isolated anti-interferon alpha monoclonal antibody, or antigen binding portion thereof, of claim 1 comprising a heavy chain variable region and a light chain variable region, wherein:

- (a) the heavy chain variable region comprises an amino acid sequence that is at least 80% homologous to an amino acid sequence selected from the group consisting of SEQ ID NOs: 19, 20 and 21; and
- (b) the light chain variable region comprises an amino acid sequence that is at least 80% homologous to an amino acid sequence selected from the group consisting of SEQ ID NOs: 22, 23 and 24;
- (c) ~~the antibody inhibits biological activity of multiple IFN alpha subtypes but does not substantially inhibit biological activity of IFN alpha 21; and~~
- (d) ~~the antibody does not substantially inhibit biological activity of IFN beta or IFN omega.~~

22-27. (Canceled)

28. (Currently amended) The antibody of claim 127, which comprises:

- (a) a heavy chain variable region CDR1 comprising SEQ ID NO: 1;
- (b) a heavy chain variable region CDR2 comprising SEQ ID NO: 4;
- (c) a heavy chain variable region CDR3 comprising SEQ ID NO: 7;
- (d) a light chain variable region CDR1 comprising SEQ ID NO: 10;
- (e) a light chain variable region CDR2 comprising SEQ ID NO: 13; and
- (f) a light chain variable region CDR3 comprising SEQ ID NO: 16.

29. (Currently amended) The antibody of claim 127, which comprises:

- (a) a heavy chain variable region CDR1 comprising SEQ ID NO: 2;
- (b) a heavy chain variable region CDR2 comprising SEQ ID NO: 5;
- (c) a heavy chain variable region CDR3 comprising SEQ ID NO: 8;
- (d) a light chain variable region CDR1 comprising SEQ ID NO: 11;
- (e) a light chain variable region CDR2 comprising SEQ ID NO: 14; and
- (f) a light chain variable region CDR3 comprising SEQ ID NO: 17.

30. (Currently amended) The antibody of claim 127, which comprises:

- (a) a heavy chain variable region CDR1 comprising SEQ ID NO: 3;
- (b) a heavy chain variable region CDR2 comprising SEQ ID NO: 6;
- (c) a heavy chain variable region CDR3 comprising SEQ ID NO: 9;
- (d) a light chain variable region CDR1 comprising SEQ ID NO: 12;
- (e) a light chain variable region CDR2 comprising SEQ ID NO: 15; and
- (f) a light chain variable region CDR3 comprising SEQ ID NO: 18.

31. (Original) An isolated anti-interferon alpha monoclonal antibody, or antigen binding portion thereof comprising:

- (a) a heavy chain variable region comprising an amino acid sequence selected from the group consisting of SEQ ID NOs: 19, 20 and 21; and
- (b) a light chain variable region comprising an amino acid sequence selected from the group consisting of SEQ ID NOs: 22, 23 and 24;

wherein the antibody inhibits biological activity of at least one interferon alpha subtype.

32. (Original) The antibody of claim 31, which comprises:

- (a) a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 19; and
- (b) a light chain variable region comprising the amino acid sequence of SEQ ID NO: 22.

33. (Original) The antibody of claim 31, which comprises:

- (a) a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 20; and
- (b) a light chain variable region comprising the amino acid sequence of SEQ ID NO: 23.

34. (Original) The antibody of claim 31, which comprises:

- (a) a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 21; and
- (b) a light chain variable region comprising the amino acid sequence of SEQ ID NO: 24.

35. (Original) An isolated anti-interferon alpha monoclonal antibody, or antigen binding portion thereof comprising:

- (a) a heavy chain variable region comprising an amino acid sequence selected from the group consisting of SEQ ID NOS: 34, 35, 36 and 37; and
- (b) a light chain variable region comprising the amino acid sequence of SEQ ID NO: 22; wherein the antibody inhibits biological activity of at least one interferon alpha subtype.

36. (Currently amended) ~~An isolated anti-interferon alpha human monoclonal antibody, or antigen binding portion thereof, that inhibits biological activity of multiple interferon (IFN) alpha subtypes, wherein the antibody does not inhibit binding of IFN alpha to interferon alpha receptor (IFNAR) expressing cells and wherein the antibody associates with IFNAR expressing cells~~ The antibody of claim 6, wherein the antibody binds to cells expressing IFNAR in the presence, but not the absence, of IFN alpha.

37. (Original) An isolated human antibody, or antigen-binding portion thereof, that competes for binding to IFN alpha 2a or IFN alpha 2b with the antibody of claim 1.

38-50. (Canceled)

51. (Original) A method of treating an interferon alpha-mediated disease or disorder in a subject in need of treatment comprising administering to the subject the antibody, or antigen-binding portion thereof, of claim 1, such that the interferon-alpha mediated disease in the subject is treated.

52. (Original) The method of claim 51, wherein the disease or disorder is systemic lupus erythematosus.

53. (Original) The method of claim 51, wherein the disease or disorder is selected from the group consisting of multiple sclerosis, inflammatory bowel disease, insulin dependent diabetes mellitus, psoriasis, autoimmune thyroiditis, rheumatoid arthritis and glomerulonephritis.

54 (Original) The method of claim 51, wherein the disease or disorder is transplant rejection or graft versus host disease.